



NIPPON KAIJI KYOKAI (ClassNK)

GHG Ref. No.: 238G(g)

Verification Statement

Mitsui O.S.K. Lines, Ltd. Head Office and Consolidated Organization

Nippon Kaiji Kyokai (hereinafter referred to as "the Society") was commissioned by Mitsui O.S.K. Lines Ltd. (Mitsui O.S.K. Lines; Head Office location: 2-1-1 Toranomon, Minato-ku, Tokyo; hereinafter referred to as the "the Applicant") to assure and verify its GHG Emissions Report (hereinafter referred to as "the Report") for the fiscal year 2022 (01 April 2022 to 31 March 2023). The Report covers direct GHG emissions (Scope1), energy indirect GHG emissions (Scope2) and other indirect GHG emissions from the Applicant's value chain (Scope3).

Scope of Verification Engagement:

The Applicant's head office and its group companies including domestic and overseas offices, and all ocean-going vessels and coastal vessels operated by the Applicant and its group companies.

Operational Boundary:

The Applicant's boundary for the consolidation method of GHG emissions is "Operational Approach" under the "Control Approach". GHG emissions are calculated only for CO₂ emissions associated with the sources mentioned in the Scope of Verification Engagement above, and other GHGs are excluded.

Applicable Standards:

1. JIS Q 14064-1 (ISO14064-1:2006) GHG quantification and reporting standards by Applicant.
2. JIS Q 14064-3 (ISO14064-3:2006) Verification criteria of the Society
Note: The Applicant's "GHG Data Management Manual" has applied the quantification methodologies set forth in the following documents;
 - (1) GHG Protocol – Corporate value chain (Scope 3) accounting and reporting standard
 - (2) Act on Promotion of Global Warming Countermeasures (Ontai-Ho).
 - (3) IMO MARPOL Annex VI
 - (4) Ministry of the Environment; emission factor database for calculating greenhouse gas emissions of organizations through supply chains (Ver 3.3)
 - (5) Guidelines for Tokyo Metropolitan Emission Trading Scheme "Guidelines for Calculating Specified Greenhouse Gas Emissions in Total Emissions Reduction Obligations and Emissions Trading Schemes"
 - (6) LCA software, IDEA database (Ver 3.3)
 - (7) IEA Emission Factor (2022)

Level of Assurance and Materiality:

Scope 1 & 2: Reasonable level of assurance (materiality threshold is 5% of the total emissions)
Scope 3: Limited level of assurance (materiality as the professional judgement of the verifier)

GHG Data Management Responsibility:

The Applicant was responsible for preparing the Report and for maintaining effective internal controls over the data and information disclosed. The Society was responsible for carrying out the verification engagement on the Report in accordance with the contract made with the Applicant. It is the Applicant who, in the final instance, will approve the Report. The Report will continue to remain under the Applicant's responsibility.



GHG and Energy Inventory:

Applicant's GHG emissions and energy consumption are shown in Tables 1 and 2 below.

(Table 1: Verification Target: GHG Emissions)

Verified GHG Emissions (Scope)	Tonnes (tCO ₂ e)
Direct GHG Emissions (Scope1)	10,086,254
Energy Indirect GHG Emissions (Scope2; location-based)	37,224
Energy Indirect GHG Emissions (Scope2; market-based)	19,483
Other indirect GHG emissions from Applicant's value chain (Scope3)	3,224,584
Category1 (Purchased Goods and Services)	50,420
Category2 (Capital Goods)	1,221,693
Category3 (Fuel- and Energy-Related Activities Not Included in Scope1 or Scope2)	1,397,333
Category5 (Waste Generated in Operations)	653
Category6 (Business Travel)	9,081
Category7 (Employee Commuting)	210
Category11 (Use of Sold Products)	545,194
Total GHG Emissions (Scope2; market-based)	13,330,321

*Scope 2 (location-based and market-based) is defined in the GHG Protocol Scope2 Guidance.

(Table 2: Verification Target: Energy Consumption)

Verified Energy Consumption	Heat (GJ)
Fossil Fuel	142,401,474
Biofuel	420,100
Electric Power	279,373
Vapor	2,533
Hot Water	14,979
Cold Water	31,977
Total Energy Consumption	143,150,436

Verification Procedure:

Verification by the Society has been carried out in accordance with ISO14064-3 to provide reasonable assurance that GHG data as presented in the Report have been prepared in accordance with "ISO14064-1: 2006 Specification with guidance at the organization level for quantification and reporting of greenhouse gas emissions and removals." The ISO14064-1 compliant quantification method was applied only for the monitoring and calculation parts of the Report.

To form a conclusion, the verification engagement was undertaken as a sampling exercise that included the following:



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- Site visit to the Applicant's Head Office (Tokyo) and its group companies (Uto Corporation and MOL Marine & Engineering Co., Ltd.).
- Interviews with the key personnel responsible for aggregating GHG emissions data and information management and preparation of Report at the above-mentioned sites.
- Verification of the integrity of the information sources and aggregation in the Head Office of GHG emissions performance data and information included in the Report.
- Review of the structure and emission source data (by vessel type) of ocean-going vessels and coastal vessels.
- Review of QA/QC system of Bunker Delivery Notes and double-check system at the time of refuelling.

Verification opinion:

In our opinion, the Report has been prepared in all material respects, based on the above Applicable Standards. Scope1 & 2 emissions by the Applicant are calculated in accordance with the selected quantification methodologies. Nothing has come to our attention that causes us to believe that the Scope3 emissions are not materially correct. There is no conflict of interest between the Society and the Applicant.

30 June, 2023

NIPPON KAIJI KYOKAI
Innovation Development Division
Corporate Officer

Yoshiya YAMAGUCHI

NIPPON KAIJI KYOKAI
Certification Department
Lead Verifier

Gensei TANAKA